

Building Kubernetes Extensions

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SIG Service Catalog

What is an extension

- Anything Kubernetes adjacent
 - Helm?
 - Istio?
- Plugin points
 - CSI?
 - CNI?
- Something that extends the API
 - Service Catalog?
 - CRDs?

What is an extension

- Is it dependent on the user?
 - Kubernetes contributor
 - Kube ADM DinD
 - Kubernetes operator
 - Helm
 - CSI, CNI
 - Kubernetes developer
 - API Extensions

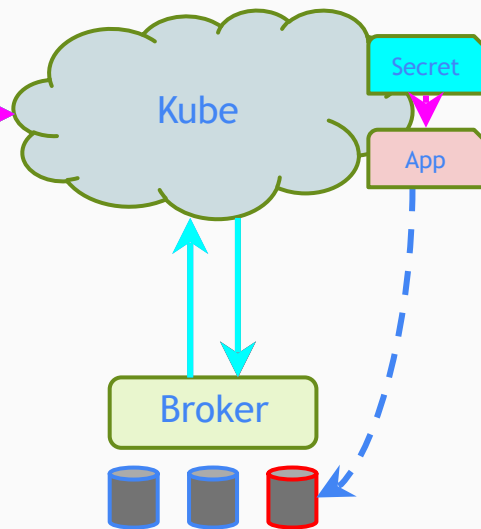
Current process

- [How to become a Kubernetes member](#)
- [How to start a SIG](#)
- [Guidelines for writing a SIG charter](#)
- [How to create repos and associate them with a SIG](#)
- github.com/kubernetes/community and github.com/kubernetes/org are edited to create teams and associate them with repos
- <https://github.com/kubernetes/test-infra> is edited to add jobs to Prow to run tests when PRs are submitted/merged

What's a Service Catalog?



1. Register Service Broker
2. Retrieve the Catalog of Services
3. Create a new Service Instance
 - Platform asks Brokers for Instance
4. Deploy Application
5. Bind Instance to an Application
 - Platform asks for new Binding/Creds
6. Access Service from Application
 - Using Creds from Binding Secret



Starting a SIG - Service Catalog

- SIG Service Catalog
 - We had Helm, but also an awareness of services we need to connect to
 - Is there a solution to this problem -> OSB
 - SIG coalesced at the same time as the actual product
 - Sponsor: Brian Grant
 - Champion: Paul Morie
 - Also leads from IBM, Google, Deis

Running a SIG

- Your problems aren't unique
- There's someone who can help you, but you have to figure out who that person is
- Finding people, not necessarily recruiting them

Building an Extension

- Early F2F to plan out the agenda of the sig to do
- A lot of the process these days is baked in and easy to follow
 - Use prow
 - Write a charter -> follow the process
 - talk to test-infra and kubernetes/org

Building an Extension

- CRDs are amazing, but maybe not for the reasons you think
 - remove the need for a dedicated ETCD
- Interface with exterior systems can be problematic
 - Decomposing into kubernetes-like workflow
 - I.E. deletes, things that can say now
- Reuse the core Kubernetes libs, they do all the heavy lifting for you
 - APIMachinery, clientage, kubebuilder, generators

Discussion

Slides

- available at github.com/jberkhahn/buildingkube